

ARTICLES

CORRECTIVE JUSTICE AND LIABILITY FOR INCREASING RISKS

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INTRODUCTION

Corrective justice is one of the two most powerful theories of tort in American legal thought today.¹ A fundamental feature of that theory is the causation requirement: an individual must have caused harm before he or she can be held liable in tort.² This Article challenges that requirement, claiming instead that corrective justice requires, as a regulative ideal, that we be liable when we have increased the risk of harm occurring, whether or not it eventually does.

To introduce the issue to be examined here, consider two situations from among the many that might illustrate it:

*The Toxic Dumper Case*³

Amalgamated Manufacturing is discovered to have been dumping toxic chemicals into an underground aquifer. Company records reveal fairly well the amounts that have been discharged. Studies suggest that individuals who have consumed well water

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1. The other is law and economics. For extended treatments of the economic analysis of torts, see generally W. LANDES & R. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* (1987); S. SHAPELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* (1987).

2. See *infra* note 11 and accompanying text.

3. Toxic Dumper is based on the facts in *Sterling v. Velsicol Chemical Corp.*, 855 F.2d 1188 (6th Cir. 1988).

from the aquifer have between a twenty and thirty-three percent chance of contracting cancer within their lifetimes because of this consumption.

The Speeding Motorist Case

A motorist, in a hurry to get from her house to an important engagement in the neighboring town, enters the connecting freeway and speeds up to ten miles per hour over the posted speed limit. She arrives at her destination safely, only a few minutes late.

Under the causation requirement, no event triggering liability in tort has occurred in either of these cases.⁴ In a regime of liability for increasing risks, a liability triggering event has occurred in both cases. Amalgamated is liable immediately for the expected value of the illnesses estimated to occur from the dumping. Liability is completely fixed at the moment Amalgamated dumps. Payment of the liability could be made to several different entities, including a trust fund administered by a court.

Likewise, Speeding Motorist is liable. Imagine that an onboard computer registers the fact that Motorist is speeding and immediately authorizes a withdrawal from Motorist's checking account in an amount equal to the value of the estimated increase in driving related accidents attributable to motorists speeding ten miles per hour above the speed limit. The money goes into a fund accessible by individuals injured by speeding motorists. Again, liability is complete at the moment of speeding. It does not increase if Motorist actually causes an injury, and does not decrease if Motorist does not cause an injury.

The cases exemplified by Toxic Dumper and Speeding Motorist have received different treatments at the hands of scholars and courts, yet those treatments share a common feature: Each in its own way attests to the widely shared assumption that the causation requirement is central to traditional corrective justice tort doctrine. This is obvious in the Speeding Motorist case. No one has seriously proposed that a person be liable when no harm occurs and the risk of harm has entirely passed. Here, the idea that causation is a necessary precondition to liability stands unchallenged.

4. As more facts are added to Toxic Dumper, this statement would have to be qualified. Tort lawyers are becoming adroit in finding elements of injury that satisfy the causation requirement. See, e.g., *Ayers v. Township of Jackson*, 106 N.J. 557, 525 A.2d 287 (1987) (recognizing the causes of action for emotional distress, deterioration of quality of life, and costs of medical surveillance). For a summary of recent developments in "cancerphobia" and "medical surveillance liability," see Willmore, *In Fear of Cancerphobia*, TOXICS L. REP. 559 (BNA, September 28, 1988).

In contrast, scholars have repeatedly challenged that idea in situations like Toxic Dumper. They advance utilitarian arguments,⁵ deterrence arguments,⁶ fairness arguments,⁷ compensation arguments,⁸ and rights-based arguments⁹ for imposing liability despite no proof of cause-in-fact.¹⁰ While the weight of these arguments is impressive, two other features of the intellectual landscape surrounding Toxic Dumper are just as noteworthy. First, the courts to date have been unwilling to recognize any systematic departure from the causation requirement. Defendants like Amalgamated are not liable in tort for increasing risks.¹¹

5. E.g., Landes & Posner, *Tort Law as a Regulatory Regime for Catastrophic Personal Injuries*, 13 J. LEGAL STUD. 417 (1984); Robinson, *Probabilistic Causation and Compensation for Tortious Risk*, 14 J. LEGAL STUD. 779, 783-99 (1985).

6. See, e.g. Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 77-91 (1975).

7. Delgado, *Beyond Sindell: Relaxation of Cause-in-Fact Rules for Indeterminate Plaintiffs*, 70 CALIF. L. REV. 881, 893-94 (1982).

8. Calabresi, *supra* note 6, at 73-77.

9. Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984).

10. Toxics litigation has prompted calls for numerous reforms of traditional tort doctrine beyond the causation requirements. For overviews of the issues raised by toxics litigation, including the cause-in-fact obstacle, see SENATE COMM. ON ENVIRONMENT AND PUBLIC WORKS, INJURIES AND DAMAGES FROM HAZARDOUS WASTES ANALYSIS AND IMPROVEMENT OF LEGAL REMEDIES, S. DOC. NO. 12, 97th Cong., 2d Sess. (1982) [hereinafter SENATE COMMITTEE]; ABA SELECT COMM. ON THE TORT LIABILITY SYSTEM, TOWARDS A JURISPRUDENCE OF INJURY: THE CONTINUING CREATION OF A SYSTEM OF SUBSTANTIVE JUSTICE IN AMERICAN TORT LAW 11-60 to 11-61 (1984); Delgado, *supra* note 7; *Developments in the Law—Toxic Waste Litigation*, 99 HARV. L. REV. 1458, 1573-1631 (1986); Elliott, *Why Courts? Comment on Robinson*, 14 J. LEGAL STUD. 799 (1985); Farber, *Toxic Causation*, 71 MINN. L. REV. 1219 (1987); Ginsburg & Weiss, *Common Law Liability for Toxic Torts: A Phantom Remedy*, 9 HOFSTRA L. REV. 859 (1981); Grad, *Remedies for Injuries Caused by Hazardous Waste: The Report and Recommendations of the Superfund 301(e) Study Group*, 14 ENVTL. L. REP. 10105 (1984); Robinson, *supra* note 5; Rosenberg, *supra* note 9; Trauberman, *Statutory Reform of "Toxic Torts": Relieving Legal, Scientific, and Economic Burdens on the Chemical Victim*, 7 HARV. ENVTL. L. REV. 177 (1983); Note, *Causation in Toxic Torts: Burdens of Proof, Standards of Persuasion, and Statistical Evidence*, 96 YALE L.J. 376 (1986).

11. E.g., H.L.A. HART & T. HONORE, CAUSATION IN THE LAW lxvii (2d ed. 1985) ("The courts [have] made it clear that in the civil law of negligence causal connection is a requisite of liability which is additional to the [creation of foreseeable risks] of harm." (footnote omitted)); see also *Sterling v. Velsicol Chem. Corp.*, 855 F.2d 1188 (6th Cir. 1988) (rejecting claim to recovery for increased risk of cancer); *Anderson v. W.R. Grace Co.*, 628 F. Supp. 1219, 1232 (D. Mass. 1986) ("To award damages based on a mere mathematical probability would significantly undercompensate those who actually do develop cancer and would be a windfall to those who do not."); *Ayers v. Township of Jackson*, 106 N.J. 557, 525 A.2d 287 (N.J. 1987) (rejecting claim to recovery for increased risk of cancer).

On the other hand, when plaintiffs can prove to a "reasonable medical certainty" that a past exposure will cause a future harm, they have been allowed recovery. See,

Second, even those who challenge causation in Toxic Dumper attest to its traditional centrality by the way they construct their arguments. The standard argument asserts that toxics cases should be governed by an emerging "public" or "intrinsically collective" theory of tort, which does not incorporate causation among its features, instead of by the "starkly individualistic" traditional corrective justice theory, which does.¹² This sort of argument does not contest the idea that corrective justice requires causation. Instead, it urges that causation is not required in Toxic Dumper, because the corrective justice theory is inapplicable here.

This Article denies that the link between corrective justice and causation is in any way essential. This is not to say that causation would rapidly vanish from tort litigation were the thesis proposed here adopted. Causation would remain a plausible requirement in a variety of tort contexts, but only because instrumental considerations such as administrative costs favor it in those cases.¹³ For those attracted to corrective justice precisely because it supposedly provides sound noninstrumental explanations for tort doctrine, explanations bottomed on ideas of moral responsibility and autonomy, the thoroughly contingent status of causation urged by this Article may not be acceptable, yet it is all that can be provided.

Part I defines corrective justice and states three conditions that a corrective justice system must meet. Parts II and III develop and defend the notion that a liability system which imposes liability for risk meets those conditions. Part IV indicates roughly how practical and administrative considerations play a role in shaping tort doctrine, as opposed to tort theory, and how those considerations will justify a continuing role for causation in tort, even if corrective justice alone cannot.

Corrective justice theory can never claim complete hegemony over tort doctrine, because tort involves a complex social structure, demanding a "thick" description.¹⁴ However, corrective justice

e.g., *Sterling*, 855 F.2d at 1200-01. This is especially true if they also have present injuries for which they are suing. Permitting recovery for the future effects avoids the undesirable splitting of a cause of action. *E.g.*, *Jackson v. Johns-Manville Sales Corp.*, 781 F.2d 394 (5th Cir.), *cert. denied*, 478 U.S. 1022 (1986); *Gideon v. Johns-Manville Sales Corp.*, 761 F.2d 1129 (5th Cir. 1985); *Eagle-Picher Indus., Inc. v. Cox*, 481 So. 2d 517, 519-20 (Fla. Dist. Ct. App. 1985).

12. *Rosenberg*, *supra* note 9, at 906-07; *see also* sources cited *infra* note 119.

13. *See infra* Part IV, text accompanying notes 125-38.

14. "Thick" social practices are ones whose "structures of signification" are complex and layered, often superimposed and knotted one to the other. C. GEERTZ, *THE INTERPRETATION OF CULTURES* 6-10 (1973). Understanding such practices requires an understanding that single gestures and actions may be the bearers of multiple layers

ideas recur at crucial points in any doctrinal debate in tort, especially where changes in the causation requirement are being proposed.¹⁵ It is important, then, to get the demands of corrective justice straight, which is what this Article attempts to do.

I. CORRECTIVE JUSTICE, RESPONSIBILITY, AND AUTONOMY

As mentioned, corrective justice is one of two dominant theoretical approaches to contemporary tort theory.¹⁶ The other is law and economics.¹⁷ Each has an array of arguments to support the claim that it is superior to its competitors. For corrective justice, one of the most powerful arguments is that corrective justice pro-

of significance. Thus, tort doctrine has been depicted as designed to deter harmful behavior, see, e.g., Landes & Posner, *Causation in Tort Law: An Economic Approach*, 12 J. LEGAL STUD. 109, 131 (1983); Priest, *Modern Tort Law and Its Reform*, 22 VAL. U. L. REV. 1, 20-21 (1987); as an arena for civilized guerilla warfare of the small against the big, see, e.g., Mashaw, *A Comment on Causation, Law Reform and Guerrilla Warfare*, 73 GEO. L.J. 1393 (1985); as a social insurance program, see, e.g., James, *Last Clear Chance: A Transitional Doctrine*, 47 YALE L.J. 704, 716 (1938); and as the embodiment of a theory of corrective justice, see, e.g., Epstein, *Defenses and Subsequent Pleas in a System of Strict Liability*, 3 J. LEGAL STUD. 165 (1974) [hereinafter Epstein, *Defenses*]; Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49 (1979) [hereinafter Epstein, *Nuisance Law*]; Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537 (1972); Weinrib, *Toward a Moral Theory of Negligence Law*, 2 LAW & PHIL. 37 (1983). Thus far, no single vision has proven successful in capturing the full complexity of tort doctrine. For commentary on recent efforts to find a unifying principle, see Englard, *The System Builders: A Critical Appraisal of Modern American Tort Theory*, 9 J. LEGAL STUD. 27 (1980); Fletcher, *The Search for Synthesis in Tort Theory*, 2 LAW & PHIL. 63 (1983).

15. Law and economics analysts have also produced defenses of the causation requirement. See, e.g., S. SHAVELL, *supra* note 1, at 105-18; Calabresi, *supra* note 6; Cooter, *Torts as the Union of Liberty and Efficiency: An Essay on Causation*, 63 CHI.-KENT L. REV. 523 (1987) (summarizing efficiency analysis of causation). However, law and economics does not constitute the same obstacle to reform as does corrective justice, because it treats causation as an instrument of policy. If convinced that the doctrine of causation does not serve the valid objectives of tort law in specific situations, the law and economics of tort would insist on modifying the doctrine. Already, for example, economic analysis supports liability for increasing risk in cases like *Toxic Dumper*. See *infra* note 104.

16. See *supra* text accompanying note 1.

17. See authorities cited *supra* note 1. Law and economics is the latest expression of a broader group of rivals to corrective justice; the members of this group share the common feature of seeking to vindicate social objectives by using law as an instrument or tool. See generally Fletcher, *supra* note 14, at 538; Wright, *Actual Causation v. Probabilistic Linkage: The Bane of Economic Analysis*, 14 J. LEGAL STUD. 435 (1985) (contrasting corrective justice and "social welfare theorists," using law and economics as the exemplar of the latter).

vides an obviously more persuasive explanation for the causation requirement than law and economics can.¹⁸

As law and economics practitioners themselves concede, their theory treats all tort doctrines as "instruments," simply effective means of serving the social objective of welfare maximization.¹⁹ Hart and Honore have accordingly labelled followers of law and economics "causal minimalists" to reflect their view that causation is (minimally) useful only insofar as it serves welfare maximization, and that it must be discarded in situations where it fails to advance that social objective.²⁰ From this perspective, causation has always seemed a problematic feature of standard tort doctrine: some law and economics advocates have actually argued that causation is superfluous,²¹ although others have offered defenses for it.²² In short, far from providing a confident explanation for the causation requirement, advocates of law and economics have been hard pressed "to fit the causation requirement into their theories at all."²³

For corrective justice theorists, causation demands a less tenuous defense, for it is "the most pervasive and enduring requirement of tort liability over the centuries."²⁴ They urge us to see causation as an integral part of a "single normative conception integrating the plaintiff's injury and the defendant's negligence," rather than part of "the instrumentalist reduction of tort law to an alien congeries of inconsistent purposes," as law and economics would have it.²⁵ What one supposedly gains from studying the corrective justice ar-

18. Sometimes the superior ability of corrective justice to explain the function of causation in tort is itself explained by noting that the inquiry into causation is "backward looking." Causation looks backward because it asks how an accident was caused, a question that cannot be asked before the accident occurs. Corrective justice is similarly backward looking because it is concerned with correcting an injustice that has occurred between two individuals. Economic analysis, in contrast, is forward looking. It is concerned with providing people with incentives to take into account the future consequences of an action, and it uses litigation to pronounce rules that will guide people in their future actions. On this account, causation and law and economics are incompatible because one is oriented to the past, the other to the future. See, e.g., Wright, *supra* note 17, at 436-37 (noting forward looking nature of law and economics). But see *infra* Part III, notes 94-124 (contrasting the *ex ante* and *ex post* viewpoints).

19. See Fletcher, *supra* note 14, at 538 (describing all tort theories seeking to advance "desirable social goals" as instrumentalist).

20. H.L.A. HART & T. HONORE, *supra* note 11; see also Cooter, *supra* note 15 (explaining how cause tends to disappear in economic analyses of tort).

21. E.g., Landes & Posner, *supra* note 14, at 114-15.

22. E.g., Calabresi, *supra* note 6; Shavell, *An Analysis of Causation and the Scope of Liability in the Law of Torts*, 9 J. LEGAL STUD. 463 (1980).

23. See Wright, *supra* note 17, at 436-37.

24. *Id.* at 435 (footnote omitted).

25. Weinrib, *Causation and Wrongdoing*, 63 CHI.-KENT L. REV. 407, 410 (1983).

guments of causation, then, is an understanding of why tort law and causation are essentially, not merely instrumentally and contingently, connected.²⁶

With this expectation in mind, all of the arguments for causation advanced in the literature on corrective justice prove disappointing. In some passages, the connection between corrective justice and causation seems simply to be assumed, rather than argued. For instance, Richard Wright has written that corrective justice theories "hold that, as a matter of individual justice between the plaintiff and the defendant, the defendant who has caused an injury to the plaintiff in violation of his rights in his person or property must compensate him for such injury, whether or not imposition of liability will further some collective social goal."²⁷ Thereafter, Wright provides no elaboration of the idea of "individual justice" that he has in mind, and neither do many others.²⁸ It is as if the proposition that there is a coherent view of "individual justice" that justifies the causation requirement has simply been stipulated.²⁹ This can hardly pass as a convincing argument.

Recently, Wright has amplified his views in a helpful way, urging that tort law has traditionally been "viewed as a system of cor-

26. For a more sympathetic account of the economic analysis of causation, one that links efficiency to the normative concerns of liberty, see Cooter, *supra* note 15, at 531-51.

27. Wright, *supra* note 17, at 435 (footnote omitted).

28. See, e.g., Alexander, *Causation and Corrective Justice: Does Tort Law Make Sense?*, 6 LAW & PHIL. 1, 4 (1987) ("corrective justice requires compensation from persons that exactly equals the amount of harm they have caused"); Borgo, *Causal Paradigms in Tort Law*, 8 J. LEGAL STUD. 419, 419-20 (1979) ("when one man harms another the victim has a moral right to demand, and the injurer a moral duty to pay him, compensation for the harm."); Epstein, *Defenses*, *supra* note 14, at 198-99 & n.87 (1974) (victim of wrongdoing has a right to be compensated by the wrongdoer for injury resulting from the invasion); Epstein, *A Theory of Strict Liability*, 2 J. LEGAL STUD. 151, 194 (1973) ("The law of tort cannot be invoked simply because the defendant has done something; it must be shown that the act in question has caused harm to the plaintiff."); Schwartz, *Responsibility and Tort Liability*, 97 ETHICS 270 (1986) ("[The] principle of corrective justice [means that] a court should impose on X the costs of Y's accident if X caused the accident by means of a wrongful action.") (footnote omitted). The work of Jules Coleman, by contrast, maintains that corrective justice entails annulling wrongful gains and losses. This does not necessarily entail equating liability with harm caused. E.g., Coleman, *Moral Theories of Tort: Their Scope and Limits: Part II*, 2 LAW & PHIL. 5 (1983). Richard Posner also disputes the linkage between responsibility and bearing the costs of harm caused, although for different reasons than Coleman's. See Posner, *The Concept of Corrective Justice in Recent Theories of Tort Law*, 10 J. LEGAL STUD. 187 (1981).

29. Wright, *supra* note 17, at 435; see also Alexander, *supra* note 28, at 9-10 (discussing Epstein's corrective justice theory and arguing Epstein sometimes treats the requirement that A pay for harm caused to B as a moral primitive).

rective justice based on individual autonomy and individual responsibility.”³⁰ This seems to promise an exposition of autonomy or responsibility that will justify the claim that causation is a necessary condition of liability. However, immediately after the view just expressed, Wright tells us that the ultimate function of tort law is to “select the responsible causes from all other causes.”³¹ If Wright’s conception of responsibility requires evaluating causes, and causes alone, Wright has just built his conclusion—that tort law must search for causes—into his definition of responsibility. Unanswered is the question: Why must an explication of responsibility (or autonomy) be an explication in terms of causes?

Lately, Ernst Weinrib has offered an answer through a different account of corrective justice. For him, corrective justice provides a formalist account of tort law. “Formalism,” Weinrib contends, “postulates that law is intelligible as an internally coherent phenomenon.”³² This internal coherence emanates from a view of traditional tort doctrine as replicating, and thereby “disclos[ing] the form of a transaction as the immediate interaction of two parties.”³³ It is to be contrasted with the distinct, but also internally coherent, idea of distributive justice, the structure of which discloses an interpersonal relationship “not [of] doer and sufferer, but [of] persons subject to a common benefit or burden, [in which] the law’s task is to divide the benefit or burden according to some criterion.”³⁴

Understanding tort, including causation, in a formalist manner, means comprehending “the morality of interaction” between “a doer and a sufferer,”³⁵ and seeing that morality as intelligible and distinct, “without postulating independently identifiable goals that stand beyond [that morality].”³⁶ One prominent aspect of tort doctrine that expresses such morality of interaction is its prevalent “bipolar” nature:

30. Wright, *Causation, Responsibility, Risk, Probability, Naked Statistics, and Proof: Pruning the Bramble Bush by Clarifying the Concepts*, 73 IOWA L. REV. 1001, 1004 (1988) (footnote omitted).

31. *Id.* at 1004 (emphasis omitted) (footnote omitted).

32. Weinrib, *Legal Formalism: On the Immanent Rationality of Law*, 97 YALE L.J. 950, 951 (1988). Corrective justice actually encompasses all “transactional” aspects of private law, including contract, restitution, unjust enrichment, and tort. *Id.* at 980. Here, I limit the examination to Weinrib’s view of tort law.

33. *Id.* at 981.

34. *Id.* at 979; see also *id.* at 983 (“Corrective justice and distributive justice are the most abstract forms that render juridical relationships intelligible.”).

35. Weinrib, *supra* note 25, at 448.

36. *Id.* at 444.

Factual causation [exemplifies bipolarity] by connecting the tortfeasor and the victim through the transitivity of cause and effect. The issues of duty and proximity are similarly bipolar: Through them the riskiness of the defendant's act is viewed from the standpoint of its reasonably foreseeable effects on the plaintiff. The adjudicative framework of tort law institutionally matches the bipolar nature of negligence doctrine. The award of damages is the remedial expression of bipolarity. This convergence suggests that bipolarity is the key to the coherence of negligence law.³⁷

Weinrib's views reflect the two recurring themes of the corrective theory to which I have already alluded. First, corrective justice is not subservient to ulterior social purposes such as advancing social welfare.³⁸ Second, corrective justice seeks its independent account from an understanding of individual morality or, in Wright's terms, of "individual autonomy and individual responsibility."³⁹

Additionally, Weinrib clarifies for us the reason that causation often seems built into corrective justice propositions, for he makes admirably plain what others simply assume. His elaboration of corrective justice presupposes what he calls a "bipolar" relationship. He then attempts to understand how norms of individual morality would operate in such an arena. He is after an understanding of the "morality of interaction" between two discrete individuals—doer and sufferer—not an understanding of individual morality in general.

Once the hunt has been conceptualized in this way, as a quest for understanding the morality of interaction and for translating that understanding into tort doctrine, it is no wonder that causation proves to be among the captured prey, for all other doctrinal competitors have been practically eliminated before the search is underway. If Speeding Motorist merely performs an action belonging to a class of behavior that statistically increases the risk of harm occurring to a rather wide and undifferentiated group of "exposed" individuals, that fact alone seems to establish no "interaction" between Motorist and others, and certainly not an "interaction" between "doer and sufferer," insofar as no suffering has yet materialized. The concept of interaction as framed by Weinrib requires that two individuals somehow be singled out and connected or linked. As Weinrib quite correctly notes, causation plays a vital role in that singling out process, because it "particularizes" the plaintiff, picks

37. Weinrib, *supra* note 32, at 969.

38. See *supra* text accompanying notes 24–29; see also *infra* note 130.

39. See *supra* text accompanying note 30.

this sufferer out of all the world of sufferers and designates his or her losses as the appropriate subject of complete redress from the defendant.⁴⁰ No other criterion works as well.

Through Weinrib, we can understand why traditional corrective justice theory exhibits such a deep commitment to causation. Once one is committed to the sort of bipolar litigation form that Weinrib describes, and seeks a noninstrumental account of what doctrines satisfy the demands of that form, doctrine that includes a causation requirement may be the best one can do. After all, as between an innocent plaintiff and a defendant who tortiously caused the injury, who should bear the loss?⁴¹

Understanding is not yet justification, however, and so far corrective justice's attraction to causation has merely been traced down to another level of stipulation rather than argument. To parallel the question asked earlier: Why must an explication of responsibility (or autonomy) be an explication in terms of bipolarity?

Invoking Aristotle, the father of the corrective justice/distributive justice distinction, is of no help here either. As Weinrib himself recounts, "Aristotle achieved [his account of the two forms of justice] through reflection on the law of his own day."⁴² What Aristotle saw when he reflected upon the law, of course, was a system of dispute resolution already exhibiting the bipolar characteristics Weinrib has described.⁴³ His reflections, in other words, were constrained from the outset by the premise of bipolarity. He did not begin, as he might, with an account of private, individual morality, and then structure litigation to embody the moral norms developed in that account.

If Aristotle had begun from the starting point of norms of private morality, he might still have ended up with a bipolar system, including causation. Aristotle lacked an understanding of both modern risk assessment techniques and institutional alternatives to

40. Weinrib, *supra* note 25, at 414. In like fashion, "wrongdoing" particularizes the defendant, picking *this* doer from among all the doers in the world as the one who owes the plaintiff compensation. *Id.*

41. *E.g.*, W. PROSSER & W. KEETON, PROSSER AND KEETON ON THE LAW OF TORTS (5th ed. 1984) ("As between an entirely innocent plaintiff and a defendant who admittedly has departed from the social standard of conduct, . . . who should bear the loss? If the result is out of all proportion to the defendant's fault, it can be no less out of proportion to the plaintiff's entire innocence." *Id.* at 287.).

42. Weinrib, *supra* note 32, at 977; *see also* Lee, *The Legal Background of Two Passages in the Nicomachean Ethics*, 31 CLASSICAL Q. 129 (1937).

43. Bipolarity is a primary characteristic of the "private law" model of litigation, which was until recently the fundamental form of all litigation in the Western world. *See infra* note 115.

the individual lawsuit necessary to conceptualize norms of private responsibility and autonomy in other ways.⁴⁴ We suffer no such impairments, however, and it no longer seems sufficient to hamstring our understanding of corrective justice by remaining precommitted to such a highly constrained structure, at least until we have inquired into the possible justifications for that commitment.

Such an inquiry should begin with what I have termed the two "recurring themes" of corrective justice.⁴⁵ Those themes express the substantive aspirations of corrective justice: to ground legal liability on norms of moral responsibility and autonomy,⁴⁶ and to distinguish clearly between these norms and other "external objectives" that law might serve, such as distributive justice.⁴⁷

44. See *infra* notes 120–124 and accompanying text.

45. See *supra* text accompanying notes 38–39.

46. Richard Posner and Jules Coleman have suggested that only some corrective justice theorists are "responsibility" theorists, while others are "rights" theorists. See Posner, *supra* note 28, at 196. Some of Richard Epstein's early work on corrective justice, for example, starts with the rights that people have and constructs a theory of tort that protects those rights. See Epstein, *Causation and Corrective Justice: A Reply*, 8 J. LEGAL STUD. 477, 479 n.9 (1979) (people have certain substantive rights, including the "property right" of being "free of the invasion of harms from others," which a just legal system ought to protect). Such approaches may seem inconsistent with the argument in the text that concepts of moral responsibility are fundamental to corrective justice. However, one cannot develop a theory of "protection" of rights without attending to the issue of protection from what. Absolute protection would paralyze freedom of action, which Epstein also wishes to protect. He cashes out "protection" by insisting that tort supplies protection from "the use of force against . . . person or property" that causes harm. *Id.* He acknowledges that he seeks some intermediate position "that prevents the original presumption in favor of freedom of action from being swallowed up by the injunction against causing harm to another." *Id.* at 479.

What explains and justifies this intermediate position? A standard criticism of all "rights" theories, including Epstein's early work, is that any intermediate position between complete freedom and complete paralysis is arbitrary until justified by some normative ground not supplied in the simple notion of a right or an entitlement. See, e.g., Alexander, *supra* note 28, at 7–11. Recently, Epstein has acknowledged this point by explicitly bottoming his tort theory on "overtly consequentialist (and utilitarian) arguments about the original distribution of rights." Epstein, *Causation In Context: An Afterword*, 63 CHI.-KENT L. REV. 653, 655 (1988). What Epstein's utilitarianism must specify, as he concedes, is why property rights are to be protected from certain actions and not others. *Id.* Once those actions against which tort protects are specified, however, one is inevitably leaning toward a theory of action-based responsibility. An agent under utilitarianism would seem to bear a moral responsibility to observe those injunctions and pay those amounts of compensation that accord with utilitarianism. Thus, even Epstein and other so-called "rights theorists" must acknowledge the importance of moral responsibility theory in corrective justice. Cf. Epstein, *supra* note 28, at 200–01 (depicting his causation theory as the position of "common morality").

47. Maintaining a clear separation between the proper realm for distributive considerations and another one for corrective or commutative considerations has long been a concern of corrective justice theorists, tracing back to Aristotle. See 2 THE ETHICS OF ARISTOTLE 113 n.3 (A. Grant 4th rev. ed. 1885); Englund, *supra* note 14; Epstein, *Nui-*

These two themes can be expressed more fully in terms of three conditions that must be jointly satisfied by tort doctrine: (1) individual liability must be assessed consistently with moral norms of responsibility for one's actions; (2) victims must be made whole (compensated); and (3) the resources for satisfying (2) must come exclusively from the liability payments required by (1). I will occasionally refer to the first condition as that of "action-based responsibility," to the second condition as "just compensation," and to the third as "internal financing of compensation."

To verify that these three conditions preserve the two recurring themes of corrective justice, notice first that any system satisfying them will maintain the separation of corrective justice and distributive justice. Looking initially at defendants, individuals are held liable solely due to actions for which they are morally responsible. They are not being made to pay on account of status, wealth, or some other distributive criterion. As for plaintiffs, they are not recipients of some distributive benefit. They are not receiving society's largesse when damages are awarded. They do not become recipients of either a welfare system or a social insurance program. Instead, they are wholly compensated by payments required from defendants.

These three components also instantiate moral principles. They sanction defendants in accordance with their moral responsibility and they compensate plaintiffs to the degree they have been wrongfully injured, all in accordance with the demands of moral autonomy.⁴⁸ The substantive idea behind corrective justice is thus threefold: private tort law should reject distributive rationales, should enforce norms of moral responsibility as to defendants, and should protect norms of autonomy as to plaintiffs.⁴⁹

This compound-condition conception of corrective justice is superior to those that in one way or another build causation into the very definition of the idea. It expresses the two major appeals of corrective justice without prejudging the question of whether cor-

sance Law, *supra* note 14, at 99; Gordley, *Equality in Exchange*, 69 CALIF. L. REV. 1587 (1981) (noting that Aristotle plainly distinguished distribution from corrective justice); Posner, *supra* note 28, at 189 (same); Weinrib, *Causation and Wrongdoing*, 63 CHI.-KENT L. REV. 407, 435, 449 (1987).

48. See *infra* text accompanying notes 50-58.

49. This is true only as a first approximation. Considerations of administration, problems of proof, costs of enforcement, and the like may urge that the set of legally enforceable norms ought to diverge from the set found in an ideal moral system. See generally H.L.A. HART, *Legal Responsibility and Excuses*, in PUNISHMENT AND RESPONSIBILITY 28, 32-34 (1968); Epstein, *Nuisance Law*, *supra* note 14.

rective justice entails causation. It may turn out, of course, that causation remains essential to corrective justice, if causation is essential to an understanding of moral responsibility upon which corrective justice is predicated.

However, the next Part of this Article argues that this is not the case. It develops a perspective on moral responsibility in which the connection between responsibility and cause-in-fact is at best contingent, and in which action-based financial or legal responsibility can more plausibly be interpreted as liability for increasing risks.

II. THE *EX ANTE* VIEW

Modern moral or ethical theorists characteristically seek to define "what principles of conduct to accept and foster as guiding or controlling our own choices"⁵⁰ By focusing on choices, such approaches view the choosing agent at the time he is confronted with the situation demanding a choice to be made. I shall call this the *ex ante* or "before the fact" view.

Someone in the *ex ante* position can bring to a decision just those data and theories of the world that are available to him at that time. To be sure, subsequent information or theories may assist in evaluating the consequences of the chosen action or even in appraising it for certain purposes. Indeed, choices we make frequently turn out badly, and often a subsequent analysis can demonstrate that part of our theories or information must be adjusted. Such retrospective judging plays a fundamental role in education and the advancement of knowledge.⁵¹ We learn from our mistakes, many of which are actions that only come to be understood later as mistakes.

When it comes to choosing, however, the actor will invariably have at his or her disposal only the accumulated results of prior understandings, wisdom, and judgment. The task that modern approaches to morality have set for themselves is to articulate princi-

50. J. MACKIE, *ETHICS, INVENTING RIGHT AND WRONG* 106 (1977); see also E. PINCOFFS, *QUANDARIES AND VIRTUES* (1986):

There is a consensus concerning the subject matter of ethics so general that it would be tedious to document it. It is that the business of ethics is with "problems", that is, situations in which it is difficult to know what one should do; that the ultimate beneficiary of ethical analysis is the person who, in one of these situations, seeks rational ground for the decision he must make; that ethics is therefore primarily concerned to find such grounds

Id. at 14.

51. It may be the dominant technique in selecting efficient or rational actions. See Latin, *Problem-Solving Behavior and Theories of Tort Liability*, 73 CALIF. L. REV. 677, 694-95 (1985) (citing H. SIMON, *MODELS OF MAN* 8 (1957)).

ples, rules, or procedures useful in evaluating choices from this *ex ante* vantage point, using only such accumulated understanding as can epistemically be brought to bear on the question at that moment. Because we cannot predict the future, our task is inevitably one of making decisions in conditions of uncertainty.

Just as morality supplies criteria to guide a chooser, so it can supply criteria against which to judge the adequacy of the chooser's decision. One must be careful here to distinguish between the vantage point of the judge and the vantage point of the actor. The person who, after the fact, judges that actor must respect the agent's *ex ante* view. It is unfair to appraise an actor using criteria, information, or theories that were unavailable to her at the relevant moment, the moment of decision.⁵² We must ask whether the agent chose correctly or permissibly, knowing what the agent then knew. After-acquired information cannot enter into the analysis. "After the event even a fool is wise. But it is not the hindsight of a fool; it is the foresight of the reasonable man which alone can determine responsibility."⁵³

The *ex ante* view expresses an influence in ethical thinking extending back at least to some of the ancient Greeks, Plato prominent among them, who hoped that the techniques of prediction and control could subdue the contingencies and uncertainties otherwise afflicting human existence.⁵⁴ Since then, many moral theories have reflected the ambition to eliminate the normative significance of uncertainty, contingency, or "luck" in moral evaluation.⁵⁵

Kant's moral theory is in this tradition. Kant contends that a good will is a requirement of being worthy of happiness, and that a good will is good not because of what it "performs or effects, not by its aptness for the attainment of some proposed end, but simply by virtue of the volition, that is, it is good in itself."⁵⁶ So long as one's

52. See T. NAGEL, *THE VIEW FROM NOWHERE* 121 (1986) ("When we hold the defendant responsible, the result is not merely a description of his character, but a vicarious occupation of his point of view and evaluation of his action from within it.").

53. *Overseas Tankship (U.K.) Ltd. v. Morts Dock & Engineering Co.* ("The Wagon Mound (No. 1)"), 1961 App. Cas. 388, 424 (P.C.) (Aust.).

54. See M. NUSSBAUM, *THE FRAGILITY OF GOODNESS* 237 (1986) ("A central theme in this book so far has been the ambition of human reason to subdue and master *tuche* [luck] through the arts or sciences. Plato took it to be the task of philosophy to become the life-saving *techne* [art or science] through which this aspiration could be accomplished . . .").

55. For efforts to explore why luck should play the important role it does in everyday moral judgments, see T. NAGEL, *Moral Luck*, in *MORTAL QUESTIONS* 24-38 (1979); B. WILLIAMS, *Moral Luck*, in *MORAL LUCK* 20 (1981).

56. I. KANT, *CRITIQUE OF PRACTICAL REASON* 10 (T. Abbott trans. 1909).

volition is to act according to a universally applicable rule, Kant asserts:

even if it should happen that, by a particularly unfortunate fate or by the niggardly provision of a stepmotherly nature, this will should be wholly lacking in power to accomplish its purpose, and if even the greatest effort should not avail it to achieve anything of its end, and if there remained only the good will, . . . it would sparkle like a jewel in its own right, as something that had its full worth in itself. Usefulness or fruitlessness can neither diminish nor augment this worth.⁵⁷

Actions can thus be judged only in accordance with the will of the person who acts. At its limit, this theory makes any act theoretically permissible, no matter how horribly it turns out, so long as the actor possessed the appropriate state of mind when he made the decision to act. Conversely, the actor is responsible for an immoral choice whether or not any harm follows from it.⁵⁸ What must be examined in the Kantian framework is solely and exclusively a condition existing at the time the actor chooses to act. The framework thus adopts the *ex ante* view.

Utilitarian theories are in many ways opposed to Kantian ones, and might be thought to be so here, insofar as they judge actions solely in terms of their consequences. This is not so. Although some utilitarians might be taken to hold otherwise, the most plausible utilitarian theories judge actions only according to their expected ability to produce the most good for the most people.⁵⁹ Even the most stringent versions of such utilitarian theories demand no more than that the best calculations available predict the action chosen will produce the most desirable state of affairs.⁶⁰ Wrong actions are those whose expected outcomes are not the best. Again,

57. I. KANT, *FOUNDATIONS OF THE METAPHYSICS OF MORALS* 10 (L. Beck trans. 1959); see also *THE REPUBLIC OF PLATO* 77 (F. Cornford trans. 1945); M. NUSSBAUM, *supra* note 54, at 329.

58. See J. FEINBERG, *DOING AND DESERVING* 33 (1970) ("If [the proponent of moral responsibility] is a rational man[,] he will admit that moral responsibility for external harm makes no sense and argue that moral responsibility is therefore restricted to the inner world of the mind, where the agent rules supreme and luck has no place . . ."); Zimmerman, *Luck and Moral Responsibility*, 97 *ETHICS* 374, 385 (1987) (what happens after an individual performs an action is, strictly speaking, "dispensable in the assessment of moral responsibility").

59. See, e.g., W. HUDSON, *A CENTURY OF MORAL PHILOSOPHY* 172 (1980); J. SMART & B. WILLIAMS, *UTILITARIANISM: FOR AND AGAINST* 37-42 (1973); G. WARNOCK, *THE OBJECT OF MORALITY* (1971); Braybrooke, *The Choice Among Utilitarianisms*, 4 *AM. PHIL. Q.* 28 (1967); Brock, *Utilitarianism*, in *AND JUSTICE FOR ALL* 217, 220 (T. Regan & D. VanDeVeer ed. 1982).

60. See authorities cited *supra* note 59.

these theories assume the *ex ante* view, and are thus consistent with Kant.

What explains this point of tangency between utilitarianism and kantianism? It results from their shared view of the person—an agent confronted with choices—that in turn influences their moral theories.⁶¹ This is the person toward whom their regulative force is aimed.⁶² Both theories address a reasoning agent who is faced with a choice among alternative courses of action, and their precepts purport to advise agents, or to explicate the reasoning process such an agent would go through, at or prior to the moment of choice.⁶³ Utilitarians, no less than Kantians, postulate reasoning individuals, who can choose utilitarianism and utility maximizing courses of action that the utilitarians urge upon them. Kantians, no less than utilitarians, seek to articulate norms that can guide how people behave when they face choices. They both embrace a con-

61. Any moral theory depends upon a conception of the persons it is expected to serve. John Rawls, for one, made this explicit, when he argued that "embedded in the principles of justice . . . is an ideal of the person that provides an Archimedean point for judging the basic structure of society." J. RAWLS, A THEORY OF JUSTICE 584 (1971); see also Hutchinson, *Beyond No-Fault*, 73 CALIF. L. REV. 755, 756 (1985) (all tort theories "depend[] on rarely articulated foundational assumptions about the nature of human personality and social organization"); Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 957 (1982) ("Almost any theory of private property rights can be referred to some notion of personhood. The theory must address the rights accruing to individual persons, and therefore necessarily implicates the nature of the entity to which they accrue."). But see Rawls, *Justice as Fairness: Political not Metaphysical*, 14 PHIL. & PUB. AFF. 224, 232-33 (1985) ("Justice as fairness starts from the idea that society is to be conceived as a fair system of cooperation and so it adopts a conception of the person to go with this idea."). I doubt that this is inconsistent with the assertion in the text, for it would seem that a conception of the person as capable of engaging in and flourishing in a system of cooperation would have to precede the conception of society. The idea that Rawls stresses in his more recent work is that his theory of justice, having been specified as a fair system of cooperation, only has to be committed to so much of a conception of the person as satisfies certain minimum conditions for such a system to function. "There are, of course, many aspects of human nature that can be singled out as especially significant depending on our point of view." *Id.* at 232; see also *id.* at 234.

62. *E.g.*, M. MOORE, LAW AND PSYCHIATRY 62 (1984) ("Any system of moral or legal standards has implicitly within it an idea about the audience to whom such standards are addressed.").

63. See, *e.g.*, P. TAYLOR, RESPECT FOR NATURE (1986), which states the characteristics of moral agents, in a manner designed to be capacious enough for utilitarian as well as Kantian theories, as including:

the ability to form judgments about right and wrong; the ability to engage in moral deliberation, that is, to consider and weigh moral reasons for and against various courses of conduct open to choice; the ability to make decisions on the basis of these reasons; the ability to exercise the necessary resolve and willpower to carry out those decisions; and the capacity to hold oneself answerable to others for failing to carry them out.

Id. at 14.

ception of the modern person as one who chooses norms, and subsequently actions. In this conception, the entire burden of individual responsibility is loaded onto the choices we make.⁶⁴

These theories disagree, however, about moral objects. Utilitarianism adopts as its moral object social welfare, wealth, satisfaction of desire, the net of pleasure over pain, or some other such attribute to be maximized; kantianism takes as its moral object the individual as an autonomous being worthy of concern and respect. Both camps, however, take the same entities as subjects of their theories: moral agents capable of reason and choice.

The goal of *ex ante* ethics is to appraise an actor's choices by focusing as much as possible on the actor's abilities to predict and control, thus simultaneously reducing the influence of contingency and chance.⁶⁵ The key to doing this is to focus on choice as the ethically significant event or occurrence.⁶⁶ We cannot, of course, insulate agents themselves, or others, from the practical consequences and effects of contingencies. As Rawls proclaims: "Nothing can protect us from the ambiguities and limitations of our knowledge, or guarantee that we find the best alternative open to us."⁶⁷ However, we can place ourselves beyond reproach if we act with "deliberative rationality," taking into appropriate account all those facts and theories about the world that we can know, and acting on that basis.⁶⁸

To be contrasted to the *ex ante* viewpoint is the *ex post* view. For our purposes the *ex post* view can be defined as a vantage point that permits appraisals of responsibility to turn on facts or theories that could not have been known to the actor prior to her taking the relevant action.⁶⁹ When tort law employs the cause-in-fact require-

64. See also *infra* text accompanying notes 66–68.

65. See *supra* text accompanying notes 50–55.

66. The idea that "fortuitous factors unconnected to the actor can have nothing to do with his responsibility" has been cited as one of our basic moral beliefs. Moore, *Causation and the Excuses*, 73 CALIF. L. REV. 1091, 1119 (1985). But see Farber, *supra* note 10, at 1245–46 (cause-in-fact requirement also a part of basic morality).

67. J. RAWLS, A THEORY OF JUSTICE 422–23 (1971).

68. *Id.*

69. Legal scholars employ the terms *ex ante* and *ex post* in a number of ways, not all of them compatible. Within specific topics of interest to jurisprudence and law, the *ex ante* and the *ex post* are reflected in certain easily recognized pairs of opposing views, as indicated in the following table:

ment as it currently does, it adopts the *ex post* viewpoint.⁷⁰ From this viewpoint, it is eminently possible for Jones and Smith to perform otherwise identical acts, but for one to escape any financial responsibility whatsoever, while the other is held liable for massive damages. If the only causal stories Jackson can construct about his harm include Jones and not Smith (perhaps that Jones' car hit Jackson, while Smith's car was being negligently driven on the other side of town) Smith will not be liable, and Jones will be liable for

Topic	Ex Ante Approach	Ex Post Approach
End or Objective	community/social welfare	individual/autonomy
Judicial function	rule declaring	rule enforcing
Source of rules	teleology	deontology
Litigation objective	deterrence	corrective justice
Nature of judicial activity	legislative	adjudicative
Representative theory	utilitarianism	Kantianism
Litigation function	pronounce social rules	resolve disputes between parties

For further discussion of one or more of these distinctions, see M. DAMASKA, *THE FACES OF JUSTICE AND STATE AUTHORITY* 97-180 (1986) (contrasting the conflict-resolving type of proceeding (*ex post*) and the policy-implementing type of proceeding (*ex ante*)); R. DWORKIN, *TAKING RIGHTS SERIOUSLY* (1977); D. HOROWITZ, *THE COURTS AND SOCIAL POLICY* 274 (1977) (noting conflict between interests of parties before the court (*ex post*) and interests of absent parties who might be affected by the decision (*ex ante*)); Chayes, *The Role of the Judge in Public Law Litigation*, 89 HARV. L. REV. 1281, 1282-84 (1976) (contrasting "traditional" model of the lawsuit as a "vehicle for settling disputes between private parties about private rights" with public law model); Dan-Cohen, *Bureaucratic Organizations and the Theory of Adjudication*, 85 COLUM. L. REV. 1, 1-7 (1985) (arbitration model (*ex post*) and regulation model (*ex ante*) contrasted); Fiss, *The Supreme Court, 1978 Term—Foreword: The Forms of Justice*, 93 HARV. L. REV. 1, 36 (1979) (contrasting dispute resolution (*ex post*) with public value articulation (*ex ante*)); Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537, 556 (1972) (contrasting the paradigm of reciprocity, in which cases are decided "on grounds of fairness to both victim and defendant without considering the impact of the decisions on the society at large," with the paradigm of reasonableness); Fletcher, *Paradoxes in Legal Thought*, 85 COLUM. L. REV. 1263, 1289-90 (1985); Scott, *Two Models of the Civil Process*, 27 STAN. L. REV. 937, 937-40 (1975) (conflict resolution model (*ex post*) contrasted with behavior modification model (*ex ante*)). Characteristically, Prosser tries to synthesize the two perspectives, asserting that "society has an interest in having any single dispute between individuals resolved fairly and promptly" as well as "an interest in the outcome because of the system of precedent on which the entire common law is based. . . . There is good reason, therefore, to make a conscious effort to direct the law along lines which will achieve a desirable social result." W. PROSSER & W. KEETON, *supra* note 41, at 16. Within the philosophical literature, the distinction finds expression in differentiating the contexts of rule making and rule application. See, e.g., H.L.A. HART, *Prolegomenon to the Principles of Punishment*, in PUNISHMENT AND RESPONSIBILITY 1, 19-23 (1968); R. WASSERSTROM, *THE JUDICIAL DECISION* 13-71 (1961); Rawls, *Two Concepts of Rules*, 64 PHIL. REV. 3 (1955).

70. Orthodox tort doctrine contains other *ex post* principles as well. Contributory negligence is an example. See Fletcher, *The Search for Synthesis in Tort Theory*, 2 LAW & PHIL. 63, 80-82 (1983).

Jackson's entire loss. Should Jones be in hiding or judgment-proof, Jackson will be unable to recover anything from Smith, and will go entirely uncompensated. From the *ex ante* viewpoint, this is an entirely anomalous way to treat two *ex ante* identical actions.

As a direct consequence of making Jones's and Smith's financial responsibility turn on the contingency of what causal chain actually materializes after each one acts, the agent and victim face an additional contingency (over and above the contingency of injury itself). The presence of these uncertainties, resulting in treatment of both plaintiffs and defendants in apparently arbitrary ways, is entirely due to the *ex post* operation of the cause in fact requirement.⁷¹ Given the pervasive influence of the *ex ante* perspective in moral theory,⁷² the persistence of causation in tort is an anomaly, and one that deepens when we appreciate how much that influence has already spread into legal theory.

The concept of choice, and hence the *ex ante* perspective, became crucial to modern legal theory once the Enlightenment Project reconceived the world and its rules as things that we construct and choose, rather than as immutable givens.⁷³ This "discovery" has upset certain justifications for the coercive power of law, such as appeals to divine guidance or to the natural order of things. Once law is understood fundamentally as an instrument of state power, and legal rules as articulations of that power, it becomes possible to question the legitimacy of that power.⁷⁴ Because different legal regimes could have been chosen, any particular regime bears a special burden of justification. Choice thus makes legal norms disputable. Yet just as choice opens up vistas of contention about why we endure one set of legal institutions rather than another, choice subsequently offers a strategy to resolve that contention: If legal rules can be defended as the products of some process of choice that we

71. See e.g., Franklin, *Replacing the Negligence Lottery: Compensation and Selective Reimbursement*, 53 U. VA. L. REV. 774, 790 (1967) (Franklin is primarily concerned with the "lottery" that treats victims differently, but he is also aware of the defendant's lottery); Sugarman, *Doing Away With Tort Law*, 73 CALIF. L. REV. 555, 591 (1985). See also Thomson, *The Decline of Cause*, 76 GEO. L.J. 137, 139 (1987) (Just as causation is belittled by legal theorists, "there has been a phenomenon equally entitled to be called 'The Decline of Cause' in moral theorizing.").

72. See *infra* text accompanying notes 87-88.

73. E.g., R. UNGER, *SOCIAL THEORY: ITS SITUATION AND ITS TASK, A CRITICAL INTRODUCTION TO POLITICS, A WORK IN CONSTRUCTIVE SOCIAL THEORY 1* (1987) ("Modern social thought was born proclaiming that society is made and imagined, that it is a human artifact rather than the expression of an underlying natural order.").

74. See *infra* note 75.

recognize as legitimate, the rules themselves might regain legitimacy.⁷⁵

Our current fascination with consent theories of contract,⁷⁶ with original intention theories of constitutional interpretation,⁷⁷ and with social contract theories and contractarianism⁷⁸ bespeaks the contemporary power of choice as a legitimating strategy in law and legal theory.⁷⁹ Arguments based on rational and autonomous choice span across substantive theoretical disputes and dominate much of current discourse. Harsanyi,⁸⁰ Posner,⁸¹ Buchanan,⁸² and others deploy *ex ante* theories to justify various maximizing principles, while Rawls,⁸³ Nozick,⁸⁴ Von Hayek,⁸⁵ and others defend individualistic, nonmaximizing theories on the basis of the same perspective.⁸⁶ Indeed, the influence of *ex ante* thinking is already so

75. See, e.g., R. DWORKIN *supra* note 69, at 157 ("It is one of the conditions we impose on a theoretical principle, before we allow it to figure as a justification of our convictions, that the people the principle would govern would have accepted that principle, at least under certain conditions, if they had been asked, or at least that the principle can be shown to be in the antecedent interest of every such person."); W. NELSON, ON JUSTIFYING DEMOCRACY 13 (1980) ("Social contract theorists [claim government] lacks the right to rule or its citizens lack the obligation to obey unless these citizens have somehow authorized it to rule or consented to its rule."); Lukes, *Of Gods and Demons: Habermas and Practical Reason*, in HABERMAS: CRITICAL DEBATES 134, 137 (J. Thompson & D. Held ed. 1982) ("[A]ny serious social analysis . . . must address the question: are social norms which claim legitimacy genuinely accepted by those who follow and internalise them, or do they merely stabilize relations of power?"); Raz, *Government By Consent*, in NOMOS XXIX, AUTHORITY REVISITED 76, 76 (J. Pennock & J. Chapman eds. 1987) ("The idea that the legitimacy of government rests on consent is deeply embedded in Western thought.").

76. E.g., Barnett, *A Consent Theory of Contract*, 86 COLUM. L. REV. 269 (1986).

77. See, e.g., THE FEDERALIST SOCIETY, THE GREAT DEBATE: INTERPRETING OUR WRITTEN CONSTITUTION (1985); STILL THE LAW OF THE LAND? (J. McNamara ed. 1987); Kay, *Adherence to the Original Intentions in Constitutional Adjudication: Three Objections and Responses*, 82 NW. U.L. REV. 226 (1988).

78. See, e.g., R. EPSTEIN, TAKINGS (1985); J. RAWLS, *supra* note 67. See generally H. BERAN, THE CONSENT THEORY OF POLITICAL OBLIGATION (1987).

79. See generally Christman, *Constructing the Inner Citadel: Recent Work on the Concept of Autonomy*, 99 ETHICS 109, 110 (1988) (describing self-governance as part of the core meaning of the concept of autonomy).

80. J. HARSANYI, ESSAYS ON ETHICS, SOCIAL BEHAVIOR AND SCIENTIFIC EXPLANATION (1976).

81. R. POSNER, THE ECONOMICS OF JUSTICE (1981).

82. J. BUCHANAN & G. TULLOCK, THE CALCULUS OF CONSENT (1962).

83. J. RAWLS *supra* note 67.

84. R. NOZICK, ANARCHY, STATE AND UTOPIA (1974).

85. F. VON HAYEK, LAW, LEGISLATION AND LIBERTY, VOL. II: THE MIRAGE OF SOCIAL JUSTICE (1976).

86. Diverse theories support the idea that an actor ought not to be judged according to criteria or information not available at the time of choice, despite their disagreements concerning the relevant criteria. This leaves open a number of perplexities. An actor might have engaged in the best practical reasoning possible, and yet have chosen a

prevalent in modern law that in a slightly different context, *ex ante* analysis has simply been equated with rationality.⁸⁷ It seems fair to say that the *ex ante* view dominates modern American moral and legal theory.⁸⁸

The aspiration of maximizing the role of prediction and control has also been cited as an objective of Western legal principles. As Hart has observed, virtually every area of common-law decision making dealing with matters of individual accountability for actions employs certain excusing doctrines: mistake, ignorance of fact, coercion, undue influence, insanity, fraud, and the like.⁸⁹ Whether it be a civil transaction—such as a will, a gift, a marriage, or a commercial contract—or an alleged criminal violation, these doctrines manifest a common thread: law creates a “choosing system, in which individuals can find out, in general terms at least, the costs they have to pay if they act in certain ways.”⁹⁰ The two broad advantages of a choosing system are: “(1) the advantage to the individual of determining by his choice what the future shall be [i.e., control] and (2) the advantage of being able to predict what the future will be [i.e., prediction].”⁹¹ Each of the excusing doctrines mentioned is relevant to questions of legal accountability because their presence may deny agents one or the other, or both, of the advantages of prediction or control, typically by casting doubt on whether the ac-

wrong action because of a mistake of fact or of theory. Conversely, an actor might stumble into the correct action quite inadvertently, using a defective choice procedure yet taking the objectively correct action. Or again, an actor might take the wrong action under conditions that make his decision seem morally justifiable. These possibilities all receive extensive treatment in the laws of crimes and torts, among other places. Kantians and utilitarians may well attack these perplexities in different ways without disturbing the central consensus: an evaluation of an actor on the basis of an action ought to evaluate the state of the world at the time of choice.

87. See, e.g., Easterbrook, *The Supreme Court, 1983 Term—Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4, 10–12 (1984) (identifying use of *ex ante* thinking as first of three “fundamentals” for assessing whether the Supreme Court is engaging in economic thinking, and later referring to economic thinking as nothing more than “applied rationality”).

88. Of all legal commentators, Arthur Leff may have written most eloquently about this aspect of the modern condition: “Put briefly, if the law is ‘not a brooding omnipresence in the sky,’ then it can be only one place: in us. If we are trying to find a substitute final evaluator, it must be one of us, some of us, all of us—but it cannot be anything else.” Leff, *Unspeakable Ethics, Unnatural Law*, 1979 DUKE L.J. 1229, 1233 (footnote omitted). Reflections of the primacy of choice in modernity permeate the legal literature. See, e.g., Dan-Cohen, *supra* note 69, at 18–19; Tribe, *Constitutional Calculus: Equal Justice or Economic Efficiency?*, 98 HARV. L. REV. 592, 617 (1985); *supra* notes 50–53 and accompanying text.

89. H.L.A. HART, *supra* note 49, at 32–38.

90. *Id.* at 44 (emphasis in the original).

91. *Id.* at 45.

tor made a real, unfettered choice or by depriving the actor of sufficient predictive capability. That an agent ought to be protected from otherwise applicable adverse legal consequences when one or more of these excusing conditions are present is a deeply held principle in our legal tradition.⁹²

Hart did not explicitly invoke the moral tradition we have just finished briefly surveying, but he was plainly writing within it. He emphasized the significance of choice and he marshalled the key *ex ante* ideas of prediction and control to explain the advantages of law as a choosing system. When he came to focus on the excusing conditions particularly germane to the criminal law, he reemphasized these themes, arguing that these conditions function to "maximiz[e] within the framework of the coercive criminal law the efficacy of the individual's informed and considered choice in determining the future and also his power to predict that future."⁹³ This argument aptly summarizes the ambition of an *ex ante* legal system as a whole: to maximize the efficacy of the individual's deliberative rationality in determining the future legal consequences of his or her actions.

Judged against this yardstick, current tort doctrine is deficient. By adhering so steadfastly to the causation requirement, it fails to maximize the advantages of prediction and control for the agent. Generally speaking, two factors have contributed most significantly to this failure: the absence, until recently, of a clearly expressed, clearly preferable alternative doctrinal system; and the presence of certain impediments to breaking loose from the grip of causation. The next Part addresses these factors.

III. TORT LAW

A. *Expected Harm*

Bringing tort into line with the *ex ante* view requires familiarity with the concept of expected harm. The expected harm of an action is simply a summation of all the discrete harms that an action might cause, discounted by the probability that each discrete harm will in fact ensue.⁹⁴

92. See, e.g., *id.*

93. *Id.* at 46.

94. See, e.g., Cooter, *supra* note 15, at 532 ("The accident's probability multiplied by the resulting harm equals, by definition, the expected harm."). Actually, different harms can result from an accident; for example, an auto accident victim may injure a limb, suffer a strained back, or be paralyzed for life. In these cases, expected harm

Modern decision theory depends heavily upon the contention that if someone were interested in behaving rationally when facing decisions in which consequences were unknown, one would attempt to estimate an expected value for each possibility, in which expected harm would be a component, and then would choose the action that had the greatest expected value.⁹⁵ This estimation is accomplished by relatively modern and complex techniques of risk assessment.⁹⁶ The basic technique is fault-tree analysis, in which the conceivable consequences of an action are sketched out schematically. Each point at which the action could have more than one consequence is represented as a node, from which different branches indicating the different options extend outward to other nodes and branches. When displayed pictorially, the technique produces a tree-like image. It acquires its name by virtue of that fact.⁹⁷

Using fault-trees, as well as other forms of analysis, risk assessment translates future uncertain occurrences into risks, and then discounts the value of future occurrences to present values. Combined, these methods change an array of more or less uncertain futures into a present expected value, and thereby transform a

equals the sum of all expected harms, each multiplied by the probability that that particular harm will occur.

95. See, e.g., M. RESNIK, CHOICES 88-100 (1987) (explaining Von Neumann-Morgenstern utility theory, under which the proposition in the text can be proved as the Expected Utility Theorem); Edwards & Von Winterfeldt, *Cognitive Illusions and Their Implications for the Law*, 59 SO. CAL. L. REV. 225 (1986).

There are many axiomatic treatments of decisionmaking. The axioms purport to be, and usually are, rules of behavior that no one would wish to violate when the stakes are high. Most such sets of axioms lead to a single theorem, known as the Subjectively Expected Utility (SEU) model. The model simply asserts that given various available alternative actions, one either should or does choose the one that has the largest SEU.

Id. at 251.

96. The literature on risk analysis and risk assessment is large and expanding. A succinct, readable explanation can be found in NATIONAL RESEARCH COUNCIL, RISK ASSESSMENT IN THE FEDERAL GOVERNMENT: MANAGING THE PROCESS (1983). The theory of decision making under conditions of uncertainty is outlined in many texts. In many ways the best are still R. LUCE & H. RAIFFA, GAMES AND DECISIONS (1957), and H. RAIFFA, DECISION ANALYSIS (1970). See also M. RESNIK, *supra* note 95. Risk assessment and analysis is also developing its own scholarly journals, including RISK ANALYSIS and the JOURNAL OF RISK AND UNCERTAINTY.

97. Fault-tree analysis's most prominent and publicized use was undoubtedly the Rasmussen Report, a study commissioned by the Nuclear Regulatory Commission to assess the probabilities of accidents in civilian nuclear reactors. UNITED STATES NUCLEAR REGULATORY COMMISSION, THE REACTOR SAFETY STUDY: AN ASSESSMENT OF ACCIDENT RISKS IN U.S. COMMERCIAL NUCLEAR POWER PLANTS (WASH-1400) (1975). For criticism of the methodology, see, e.g., NUCLEAR ENERGY POLICY STUDY GROUP, NUCLEAR POWER ISSUES AND CHOICES (1977).

concern about future states of affairs into a decision about present action. Although we cannot know the future, we can approximate the risks and calculate the expected value, and the expected harm of the action.

Expected harm calculations can be made to any desired degree of refinement, so long as information upon which to base probability assessments is available. In the simplest, limiting case, consider an action that will have just two harm-related consequences: either a harm with a value of H will eventuate, or no harm, NH , will. The probability of H occurring is estimated as p . Because H and NH exhaust the possibilities, we know that the probability of NH occurring is $1-p$. In these circumstances, expected harm, EH , is equal to the amount of harm associated with each possible outcome, multiplied by the probability of that outcome, added together, or $[pH + (1-p)(NH)]$. Because NH is the "no harm" option, we can set the value of the harm it represents at zero, in which case the EH of this action simply equals pH .

If one sought solely to minimize harm, one should select the course of action that presented the lowest expected harm. If one were committed to additional values associated with an action, expected harm might not be minimized, but insofar as one wanted to compare harm to other aspects of the situation, expected harm still ought to be calculated. Suppose, for instance, one wished to select an action that held out the best chance for maximizing the net of benefits over harms, or the most utility. Expected harm would have to be estimated as a preliminary step to the ultimate decision. It is an indispensable consideration for someone attempting to be deliberatively rational with respect to decisions under uncertainty.

B. *Liability for Expected Harm*

Risk assessment is already familiar to some areas of public law, such as environmental law.⁹⁸ Furthermore, it represents merely a more formal treatment of factors that tort law either already assumes people employ or encourages people to use in their deliberations.⁹⁹

98. The literature on environmental risk assessment is vast. For two examinations and critiques, see Latin, *Good Science, Bad Regulation, and Toxic Risk Assessment*, 5 YALE J. ON REG. 89 (1988), and McGarity, *Regulatory Analysis and Regulatory Reform*, 65 TEX. L. REV. 1243 (1987).

99. Under the famous Learned Hand formula for negligence, for example, the agent must have some sense of the magnitude of the harm and the probability of its occurrence (the expected harm) as well as the costs of precaution. *United States v. Carroll Towing Co.*, 159 F.2d 169 (2d Cir. 1947) (Hand, J.).

Under the reasonable person standard for negligence, for instance, the agent must be able to consider the risks of the situation in conjunction with other circumstances, including the potential benefits to others associated with the action. It is not enough, in such cases, simply to know that harm might occur; one wants to know about the magnitude and likelihood of the harm as well. If you know that your neighbor's two year old has an elbow that easily becomes dislocated, it might be negligent to grab her by the hands and whirl her around; if you are playing on a jungle gym with her and she begins to fall, it might not be negligent to reach out and grab her by her hand to prevent her falling onto a board with exposed nails sticking out of it. It also might not be negligent to grab her hand to guide her across the street in heavy traffic, even though that might dislocate her elbow. Determinations of negligence thus require some capacity to assess the magnitude and likelihood of harm in order to compare it to available precautions and to assess alternative action possibilities.¹⁰⁰

Strict liability might at first glance seem different, for it holds an agent liable in tort even if the action is one that would meet a test of being a reasonable thing to do, all things considered. For instance, one is liable under strict liability even if the costs of precaution are greater than the magnitude of the harm times its probability (thus not negligent under Hand's formula). That being the case, it might seem that in a system of strict liability an agent need know only that an action might cause harm. As Holmes wrote, tort law announces that one acts at one's peril.¹⁰¹ To know that we are in peril of strict liability, we do not have to estimate expected harm, we merely need to know that our action might cause harm.

However, a deliberatively rational agent would make expected harm calculations in any event, because doing so would enable her to minimize the risks of strict liability. Many actions are typically preceded by a number of preliminary decisions. As one contemplates building a dam, for instance, one confronts numerous ques-

100. Even formulations of the reasonable person standard that appeal to community norms of behavior must admit some attention to these considerations, if only indirectly, because the process of developing a community norm involves arriving at a consensus as to what constitutes acceptable behavior. The required judgments of acceptability are made by inspecting those previous experiences to see how things turned out, all things considered. Actions that seem unnecessarily dangerous in retrospect would be just those that, viewed prospectively, present too high a combination of potential harm and probability, in light of the potential gains, to seem sensible.

101. O.W. HOLMES, *THE COMMON LAW* 79 (1881).

tions of detail in design and construction: how high to build, what materials to use, what design to employ, what size spillways to construct, and so on. On each of them, an agent wants to deliberate in roughly the same manner as she would under a negligence standard, by comparing reductions in expected liability with the costs involved in choosing among the various options. Expected liability translates to expected harm. The agent will thus try to evaluate magnitudes and likelihoods of harm before making such preliminary decisions, even under a strict liability regime.

Moreover, even when preliminary decisions are not at issue, agents will try to assess expected harm, because efforts to assess expected harm are direct consequences of the desire to exercise control over our lives, whether or not the liability system itself is responsive to those efforts. If an individual is liable for all harm her action might cause and subsequently does cause, and this is all she knows *ex ante*, she faces a liability system with considerable uncertainty. An individual faced with such a system in effect faces a lottery, or a roulette wheel, with her action representing the ball and the (unknown) dynamics of causation determining into which slot on the wheel the ball eventually falls.¹⁰² If she is deliberatively rational, as we have postulated, she will seek more information, just as individuals seek information when confronting other lotteries or gambles.

In deciding whether to gamble, a person tries to figure the expected payoff of the game. In a fair game, the wager is equal to the sum of the payout for each stop, times the probability of landing on that stop. In other words, a player's wager equals expected value. The gambler incurs a loss up front (her bet), and entertains the "risk" of winning. A rational agent confronting a strict liability system in which liability is for harm caused faces a negative payout game, in which she gets the benefit of her action, but runs a risk of losing, depending on whether she causes harm. In such cases, a rational agent will estimate the expected loss from taking the roulette wheel gamble, compare it with the benefits, and choose accord-

102. Tony Honore recently used a lottery image to argue in favor of liability for harm caused. See Honore, *Responsibility and Luck*, 104 LAW Q. REV. 530 (1988); see also H.L.A. HART & T. HONORE, *supra* note 11. In evaluating the lottery nature of tort, however, Honore employs an *ex post* perspective that ultimately fails to justify causation when the proper *ex ante* viewpoint is adopted. I am developing a critique of Honore's argument. C. Schroeder, *Act-Responsibility, Outcome-Responsibility and Compensation-Responsibility: The Misunderstood Connections* (work in progress).

ingly.¹⁰³ So, once again, a rational agent facing a strict liability system will be motivated to determine expected harm.

Yet under strict liability or negligence, tort law ultimately rests financial responsibility on a specific causal chain, which an agent cannot know in advance. Not only is this inconsistent with the premises of moral responsibility for choices, it is unnecessary. Either liability standard could be implemented using an expected harm measure of damages, eliminating a causation requirement entirely.¹⁰⁴

In strict liability, for example, a person could justifiably be held strictly liable for expected harm, on the ground that this represents the moral agent's best *ex ante* assessment of the harm that will in fact occur. If more or less harm occurs than expected, the result is simply fortuitous. The action should have been assessed on the basis of expected harm, not against unknown contingencies. Such a system would not wait for actual harm to occur. The *ex ante* rationale for not waiting for actual harm to occur is that the moral quality of the agent's behavior turns on nothing that subsequent events can reveal.

By assessing liability in an amount equal to expected harm, such a system eliminates the lottery characteristics of liability. The agent can know what liability is going to attach, because it attaches on the basis of information and calculations available to the agent at the time of decision. Contingency as to liability is reduced, and an agent can coherently make choices about risky behavior with full knowledge of the cost involved. Not only would liability for expected harm be consistent with *ex ante* moral norms, it would also reinforce those norms, because the imposition of legal liability

103. See sources cited *supra* note 96.

104. In principle, a law and economics analysis of torts supports this same result on straightforward efficiency grounds. See, e.g., Calabresi, *supra* note 6, at 71-72 (advocating "causal linkage", or increasing risk, as the basis for liability on efficiency grounds); Wright, *supra* note 17. In fact, in cases of *ex post* causal uncertainty, such as The Toxic Dumper Case, law and economics analysts typically do propose liability for expected harm. See, e.g., S. SHAVELL, *supra* note 1, at 116; Cooter, *supra* note 15, at 539; Shavell, *Uncertainty over Causation and the Determination of Civil Liability*, 28 J.L. & ECON. 587 (1985). In cases of causal certainty, the presumably lower administrative costs of a cause-based system are used to explain the efficiency preference for the traditional system. See *infra* Part IV; S. SHAVELL, *supra* note 1, at 117; cf. Calabresi, *supra* note 6, at 85 (administrative convenience in creating an actuarial basis for actors' future decisions justifies the causal inquiry). The proposal in the text in effect universalizes the efficiency conclusion in cases of *ex post* causal uncertainty by extending that conclusion to all cases. This makes good sense from an *ex ante* perspective, because all cases in which the specific causal chain from an act is not known in advance are cases of causal uncertainty.

would help ensure that the factor of expected harm is actually taken into account by the agent. By translating expected harm to others into an immediate cost to the agent, the legal rules provide a built-in incentive to engage in just the deliberatively rational process that the *ex ante* theory contemplates.¹⁰⁵

C. *Compensation and Expected Harm*

The idea developed thus far, holding agents liable for expected harm at the moment they act, satisfies the corrective justice condition of action-based responsibility. This is not yet enough to show an *ex ante* tort doctrine superior to existing doctrine on corrective justice grounds, however. The proposal must also accomplish just compensation and internal financing at least as well as the current causation-based system. In this subpart, I address the question of how well it meets these additional demands.

Many people are convinced that providing compensation is "the *purpose* of tort law."¹⁰⁶ Surely the fact that the cause-in-fact doctrine functions to gain compensation for the entire loss of the specific plaintiff before the court is a strong argument in favor of the doctrine.¹⁰⁷ The urge to compensate can also be satisfied by an *ex ante* system, but first "compensation" must be put in its appropriate place. If compensation simpliciter were the sole objective of torts, causation itself would be unnecessary and perhaps counterproduc-

105. An *ex ante* negligence system would be more complicated. The amount of liability would still equal the expected harm, but liability would only attach if expected harm exceeded expected benefits. See *supra* notes 99–100. Thus we would need to amass additional information, which may be hard to come by, to implement such a system. On the role of implementation issues in *ex ante* analysis, see *infra* Part IV.

106. W. BLUM & H. KALVEN, PUBLIC LAW PERSPECTIVES ON A PRIVATE LAW PROBLEM: AUTO COMPENSATION PLANS 13 (1965) (emphasis added); see also Sugarman, *supra* note 71, at 591.

107. It might be claimed that this Article impermissibly ignores the autonomy of the injured party while attending exclusively to the autonomy of the tortfeasor. Compensation rules that hold people liable for exactly the harm caused are sometimes justified by an appeal to protecting victim autonomy as, for example, in the egg-shell skull rule. See, e.g., Attanasio, *The Principle of Aggregate Autonomy and the Calabresian Approach to Products Liability*, 74 VA. L. REV. 677, 687–702 (1988); Epstein, *supra* note 46, at 478–80 (articulating tort law as protecting personal and property rights of potential victims). The concern for victim autonomy, however, reduces to the concerns for victim compensation and tortfeasor deterrence addressed in the text following, because tort law under the victim autonomy vision protects victims by a combination of compensation and deterrence. If one can produce a tort regime that supplies roughly the same levels of compensation and deterrence as the present one, as the text's proposal claims to do, while substantially improving the regime's response to tortfeasor autonomy, then one will have produced a system that surmounts objections founded on victim autonomy.

tive. As Gary Schwartz has observed, the desire to compensate is quite promiscuous and not at all wedded to the causation requirement; individuals can be wonderfully compensated by parties who have no causal connection to their injuries whatsoever.¹⁰⁸

On this point, Weinrib's insights concerning the relationship of corrective justice and causation are right on the mark. Weinrib argues that the function of causation in tort is not, as usually supposed, to particularize the defendant, to pick out of all the people in the world the one who should compensate the plaintiff, but rather to particularize the plaintiff, to pick out of all the injured people in the world those whom the tort system should compensate.¹⁰⁹ The causation requirement thus separates a tort system from a public health care or first-party insurance system.¹¹⁰ Of course, a society might decide to have all three systems or any combination of them; this purely descriptive distinction says nothing about whether a society should prefer one over the others.¹¹¹ What distinguishes tort from public health care and first-party insurance, however, is the tort requirement that, to recover, the plaintiff's injury must have been caused by an action against whose consequences the system intends to protect.

As it currently functions in tort, however, causation operates on the issues of the defendant's liability as well as the plaintiff's recovery. It is the connection of causation to the defendant that an *ex ante* theory of tort severs, not the connection of causation to the plaintiff. It is appropriate to sever the defendant-causation tie, from the *ex ante* view, because the full moral and legal significance of a

108. Schwartz, *The Supreme Court of California, 1977-1978 Term—Foreword: Understanding Products Liability*, 67 CALIF. L. REV. 435, 445 (1979).

109. Weinrib, *supra* note 25, at 414-15; cf. Epstein, *supra* note 46, at 491 (noting that "causation principles quickly identify the relevant actors" in tort cases, apparently meaning defendants, since in many tort contexts plaintiffs have been acted upon rather than themselves acting in any relevant way).

110. Schwartz, *supra* note 108, at 444-47.

111. Many critics of the current causation requirement have urged abandoning the private law tort structure entirely, and moving to a system based on disability rather than causation, coupled with supplementary regulatory agencies to effect additional deterrence, as necessary. See, e.g., J. STAPLETON, *DISEASE AND THE COMPENSATION DEBATE* 115-18, 139-41, 142 (1986); Sugarman, *Doing Away with Tort Law*, 73 CALIF. L. REV. 677, 682-93 (1985). In the toxics context, see Elliott, *supra* note 10. Administrative compensation and regulatory schemes, however, have weaknesses as well. See, e.g., P. SCHUCK, *AGENT ORANGE ON TRIAL* (1986); Latin, *supra* note 51, at 738-43; Pierce, *Encouraging Safety: The Limits of Tort Law and Government Regulation*, 33 VAND. L. REV. 1281 (1980) (advocating, in the end, an administrative scheme). This Article does not join issue on this question. I assume that a form of the private law tort system will be around for the foreseeable future and, thus, it is worthwhile discussing ways to improve it.

defendant's action is appraisable at the moment of action. A system that imposes liability for choices can still be a system to provide compensation for the consequences of actions. The difference is that it requires compensation from all participants in a class of actions, rather than only those whose actions fortuitously cause ultimate harm.

If the *ex ante* system compensates individuals who have been injured by actions for which *ex ante* liability has been extracted, will the system be able to balance pay-ins with payouts, as the current system seems to do, and thus satisfy the internal financing requirement? On the whole, the answer is yes. Under the *ex ante* system, an agent would not pay more in *ex ante* liability when her action actually causes harm, but she would also not pay less when the action causes no harm at all. When compared to the present system, then, there would be "underpayments" and "overpayments," viewed *ex post*.¹¹² However, the amount of liability extracted would be designed to have overages and underages cancel each other in the long run. This feature would be built into the system through the method by which expected harm figures are determined. Suppose that for a large number of similar actions, like driving ten miles an hour above the speed limit, *ex ante* expected harm payments were less than actual harm suffered by accident victims. This would imply either that the probability, *p*, or the amount of harm, *H*, for these events had been misestimated. This situation would be like a gambling house operator noticing that he was losing money on a particular roulette wheel. He might investigate and find out that the ball was stopping on red more often than black, perhaps because the wheel was out of alignment. If for some reason he could not rebalance the wheel, he could still stop the house losses by adjusting the payouts for red or by charging more for a bet on red.

If the tort system observed a similar imbalance, it would be unable to "rebalance the wheel" by changing causal sequences. Nor should it, consistent with the just compensation condition, adjust payouts to victims.¹¹³ It can and should, however, recalculate the

112. They are not overpayments or underpayments when viewed *ex ante*, of course.

113. We might, however, shift from *ex post* compensation to *ex ante* compensation by compensating "victims" once they have been exposed to risk, but before harm has materialized. This possibility, which I do not explore, has been noted by others. See Rosenberg, *supra* note 9; see also Farber, *supra* note 10, at 1241 n.98:

Although *ex ante* compensation . . . may appear quite different [it] is functionally no different from making a payment once the injury has materialized. Logically, no difference exists between compensation for an unrealized risk and compensation to all those ultimately harmed when

expected harm liability amount. Once the expected harm premiums were in line with payouts, the system would balance and internal financing would be achieved.

Of course, things will not work out ideally. For one thing, over any finite period of time the fund and the demands on the fund may get out of balance. Temporary subsidies out of general revenues might be necessary; if none were available, claimants might have to wait for part of their compensation, or defendants might have to pay more than they should until the fund rebalances. Is this any worse, however, than the failures of the present lottery system of tort requiring causation? Complaints about inadequate compensation are massive under our present system.¹¹⁴ Moreover, the present system comes as close as it does to achieving internal financing only by brute force. By obligating defendants to pay no more and no less than what the plaintiff can prove as loss suffered at the hands of an identifiable defendant, internal financing is achieved tautologically. Many individuals who on any rational ground are victims of tortious actions are simply denied recovery through this approach, thus maintaining internal balance at the cost of denying compensation altogether. Victims whose defendants are bankrupt, judgment-proof, or unavailable all wash out of the current system, as do victims who cannot prove who caused their harm.

D. *Anticipating Skepticism*

I have argued that the *ex ante* view is deep and pervasive in modern moral thinking, that tort law dependent on causation is inconsistent with it, and that corrective justice principles can be satisfied with a system that holds people liable for the expected harm of their actions, whether or not those actions cause harm. Eliminating causation in this manner would mark a profound change in tort doctrine, even though it can also be seen as but another instance of the law working itself pure. It is fair to anticipate that some reading these remarks will raise the skeptical question: If things were this obvious, why does it seem so radical and why has the thesis not

the risk materializes. Given smoothly functioning markets, compensation for the risk is equivalent to paying for insurance, which in turn is equivalent to *ex post* liability.

Likewise, in cases where risky investments can be reproduced (as in the stock market), an *ex ante* proportional tax on each risk-taking opportunity raises revenues equivalent to an *ex post* tax of the same proportion on each favorable outcome. See D. BRADFORD, UNTANGLING THE INCOME TAX 161-64 (1986).

114. See sources cited *supra* note 111.

been adopted before now? The responses to this question are best articulated by identifying impediments to the *ex ante* proposal.

By far the most substantial impediment has operated as an intellectual blinder, closing out many of the considerations raised here before they have a chance to be heard. This is our continuing commitment to the traditional private litigation form. In its bipolar structure, opposing sides face each other in a winner-take-all contest.¹¹⁵ For a time, this litigational form was buttressed by an ideology of private rights, in which rights were conceived of as enforceable only by their holders and only directly against duty holders.¹¹⁶ Ideology and form thus combined to deny any conceptual or institutional room for ideas like having plaintiffs collect compensation from administered funds, or having defendants pay risk premiums into such funds at the moment they perform a risky act—ideas that are essential to implementing an *ex ante* tort system.

Most corrective justice theorists seem to have taken the bipolar traditional litigation form simply for granted.¹¹⁷ This Article, how-

115. The distinction between private law and public law adjudicatory models entered modern scholarship through the writing of Professor Chayes. See Chayes, *supra* note 69. The "private law" model of litigation depicted by Professor Chayes contains five elements: it is bipolar (between two individuals) with an all-or-nothing outcome; it is retrospective; right and remedy are interdependent; each lawsuit is self-contained; and the process is party-initiated and party-controlled. *Id.* at 1282-83. A key part of the definition is that "right and remedy are interdependent. The scope of the relief is derived more or less logically from the substantive violation under the general theory that the plaintiff will get compensation measured by the harm caused by the defendant's breach of duty in tort by paying the value of the damage caused." *Id.* Chayes's definition mistakenly universalizes the specific common law form of private litigation to an all-purpose definition of "private law" litigation. Private morals and ethics deal with relationships between and responsibilities of persons, but there is nothing that logically connects one's private duties and the consequences of a breach of those duties. Considerations of what one's *ex ante* duties are and what one should do *ex post* about breaches certainly should be related, but the connection is not a logical one. See, e.g., J. BENTHAM, *The Constitutional Code*, in *THE WORKS OF JEREMY BENTHAM* 1, 50-51, 151-52 (J. Bowring ed. 1843) (drawing distinction between propriety of an action and propriety of punishing an action.) Chayes's mistake is widely shared, and it contributes to an unnecessary restriction of the possibilities open to private litigation.

116. This ideology is so strong that even the public law field of administrative law was originally conceptualized as a simple extension of the private law model, in which the government and its officials were treated as just another common law "person." See, e.g., Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667, 1717-18 (1975); Stewart & Sunstein, *Public Programs and Private Rights*, 93 HARV. L. REV. 1193, 1202-03, 1232-39 (1982); Sunstein, *Judicial Relief and Public Tort Law*, 92 YALE L.J. 749, 775-61 (1983). Its grip remains sufficiently strong that we still lack a fully articulated public law model applicable, for instance, to the nontraditional activities of government-as-benefactor. See *id.* It is no wonder that the standard private ideology continues to dominate the historically private law topics.

117. See Weinrib, *supra* note 32, at 979; Chayes, *supra* note 69, at 1282-84.

ever, has shown that persons can be treated justly in a system that rejects bipolarity. Continuing commitment to the bipolar form sacrifices the moral principles of individual responsibility that corrective justice entails. Once the case for *ex ante* substantive rules has been made, it becomes incumbent upon corrective justice advocates of causation to explain why form should trump substance.

To be sure, advocates of some versions of expected harm liability have been complicit in the failure to distinguish form from substance. Such proposals are typically labelled "public law" proposals,¹¹⁸ or are seen as part of a movement toward "collective" or "group" responsibility, standing somehow "between two worlds"¹¹⁹ as tort moves from the old individualism to some new sense of community responsibility. These proponents of change commit the same mistake of eliding form and substance. It remains a mistake, regardless of who is making it.

One reason the traditional bipolar structure has remained for so long is the absence of clear alternative models for structuring litigation and its outcomes. However, we have long since passed the time when on-going judicial administration of group remedies seemed unusual or extraordinary.¹²⁰ Modern administrative and bureaucratic mechanisms and institutions such as insurance companies, the Social Security Administration, and other federal agencies, and the courts' own experiences administering claims facilities supply ample models of institutional design.¹²¹ An expanded array of

118. See Rosenberg, *supra* note 9.

119. See, e.g., *id.* (arguing for a "public law" solution for toxic torts that includes liability for risk); see also Abraham, *Individual Action and Collective Responsibility: The Dilemma of Mass Tort Reform*, 73 VA. L. REV. 845, 883 (1987) ("Running through each of the principal problems that tend to be raised by mass tort litigation . . . is the tension between the traditional notion of individual responsibility and the expanded notion of collective responsibility."); Bush, *Between Two Worlds: The Shift from Individual to Group Responsibility in the Law of Causation of Injury*, 33 UCLA L. REV. 1473 (1986) (acknowledging and approving of the shift away from the principle of individual responsibility in torts toward group responsibility). See generally J. FLEMING, *THE AMERICAN TORT PROCESS* 66 (1988) (calling both the promotion of class actions and the courts' "flirtation" with industry-wide liability ideas that can include a move away from cause in fact as "markers on the road from individual responsibility to collectivism."); P. SCHUCK, *supra* note 111 (seeing developments in torts as indicating movement toward a "more collectivist, functional and managerial tort law"); Brennan, *Causal Chains & Statistical Links: The Role of Scientific Uncertainty in Hazardous Substance Litigation*, 73 CORNELL L. REV. 469, 489 (1988) (probabilistic causation relates to group activities, but-for causation relies upon analysis of individual behavior).

120. See, e.g., Eisenberg & Yeazell, *The Ordinary and the Extraordinary in Institutional Litigation*, 93 HARV. L. REV. 465 (1980).

121. For discussion of the social security system, see J. MASHAW, *BUREAUCRATIC JUSTICE: MANAGING SOCIAL SECURITY DISABILITY CLAIMS* (1983). The federal

legal institutions thus supplies the structure within which substantive rules grounded in *ex ante* premises may be implemented. The *ex ante* proposals advanced here are predicated on individual, private morality, arguing only that implementation can be done in nontraditional litigational structures. Thus, although common-law form and ideology might have precluded consideration of *ex ante* alternatives, allegiance to a "private law" system, in the sense of being predicated on substantive moral norms of responsibility and autonomy, does not stand against the *ex ante* proposal.

A second obstacle to accepting this Article's proposed system has also been cleared away. The *ex ante* proposal presupposes familiarity with the rudiments of risk analysis,¹²² but the transfer of this intellectual technology simply had not yet occurred during the formative years of modern tort doctrine.¹²³ Consider Holmes' ideas on the law of torts:

[Tort rules] cannot enable [a person] to predict with certainty whether a given act under given circumstances will make him liable, because an act will rarely have that effect unless followed by damage, and for the most part, if not always, the consequences of an act are not known, but only guessed at as more or less probable. All the rules that the law can lay down beforehand are rules for determining the conduct which will be followed by liability if it is followed by harm. . . . The only guide for the future to be drawn from a decision against a defendant in an ac-

Black Lung program provides another institutional example. See Lopatto, *The Federal Black Lung Program: A 1983 Primer*, 85 W. VA. L. REV. 677 (1983). Federal litigation involving asbestos and the Dalkon Shield also has much to teach in a movement toward the sort of tort system suggested in this Article. On administering such complex payout systems, see McGovern, *Toward a Functional Approach for Managing Complex Litigation*, 53 U. CHI. L. REV. 440 (1986).

Elaborate plans for administrative compensation of toxic victims have already been presented by several groups and commentators. See SENATE COMMITTEE, *supra* note 10; Soble, *A Proposal for the Administrative Compensation of Victims of Toxic Substance Pollution: A Model Act*, 14 HARV. J. ON LEGIS. 683 (1977); Trauberman, *supra* note 10.

122. The *ex ante* proposal deals necessarily with statistical probabilities. Despite the use of "probabilistic" language such as "more likely than not," in its developmental stages, the civil court system seems to have been relatively unaware of the mathematics of probability. The probability language used was likely taken to address issues of approvability and probity rather than statistical probabilities. See Nesson, *The Evidence or the Event: On Judicial Proof and the Acceptability of Verdicts*, 98 HARV. L. REV. 1357, 1360-63 (1985). Histories of the development of probability theory include I. HACKING, *THE EMERGENCE OF PROBABILITY* (1975), and T. PORTER, *THE RISE OF STATISTICAL THINKING* (1986).

123. Indeed, the techniques of risk analysis, econometric modelling, systems analysis, and the like are all developments of the period after the New Deal. For a brief discussion of the importance of risk assessment in the realm of regulatory affairs generally, see M. SHAPIRO, *WHO GUARDS THE GUARDIANS?* 138-40 (1988).

tion of tort is that similar acts, under circumstances which cannot be distinguished except by the result from those of the defendant, are done at the peril of the actor; that if he escapes liability, it is simply because by good fortune no harm comes of his conduct in the particular event.¹²⁴

In this passage, Holmes seems sensitive to the shortcomings of the rules he defends; they are unsuccessful in removing luck or contingency from the system. Yet he also is totally unaware of the *ex ante* possibilities. We, on the other hand, can now see that *ex post* rules of the kind he describes are not the "only guide" law can provide to human conduct, nor are *ex post* rules "all the rules" that the law might lay down. A tort system which extracts expected harm premiums is now clearly conceivable. The transfer of the rudiments of risk analysis to legal analysis has supplied a firm conceptual basis for constructing *ex ante* rules. Thus, failure to accept this Article's thesis is more a result of failing to discard two outdated conceptions of tort law, rather than of shortcomings of the thesis itself.

IV. FROM THEORY TO DOCTRINE

The main argument of this Article is now complete. The *ex ante* perspective on law and morals makes compelling a conceptual shift in tort theory, away from causation and toward liability for creating risks. How far this theory can be translated into doctrinal change can be determined only by relaxing two assumptions that have been maintained throughout the argument: (1) that administrative costs and other contingent circumstances affecting implementation are not considered; and (2) that expected harm calculations are possible for the actions under consideration by the agent. This Part of the Article briefly explores the most basic implications of relaxing each of these assumptions.

First it examines the effects of administrative costs and other implementation issues in evaluating liability for risk systems. As the case of Speeding Motorist reminds us, a liability for risk system in its pure form would extract *ex ante* payments every time an agent undertook a risky action. It is obvious that any actual efforts to collect such payments would require either nonexistent technologies (the onboard computer) or incredibly intrusive and expensive measures, such as maintaining an army of "risk monitors" throughout the community to extract payments as they spied risky behavior occurring. One of the strengths of the existing system of tort is that it waits until a compensable event has occurred before a costly law-

124. O.W. HOLMES, *supra* note 101, at 78.

suit is permitted or necessary. Under a pure liability for risk system, liability events become distinct from and potentially much more numerous than compensable events, so that the intrusiveness and the administrative costs of the system ought to be substantially more than the present system's.

Comparative costs of administration thus may generally favor a cause-based system. What is more, so long as the second assumption is maintained (expected harm is calculable), a cause-based system can under certain circumstances roughly accomplish the same objectives as a liability for risk system. Reflecting back on our earlier roulette wheel examples, liability for risk and cause-based liability bear the same relationship to one another as two roulette wheel games. In game one, the player pays upfront a sum equal to the expected liability that will be imposed by the wheel, and subsequently pays nothing, regardless of where the ball stops. In game two, the player pays nothing upfront and subsequently pays the full value of the stop at which the roulette ball comes to rest. Viewed *ex ante*, game one and game two have identical expected liabilities. For large enough plays of the games, the liability extracted by the games will be roughly equal, so that the compensation goals of corrective justice could, as a first approximation, be served by either.

Which game would our *ex ante* deliberatively rational agent choose to play? This depends on that agent's taste for risks. Risk averse individuals would prefer the first game, or the liability for risk system, whereas risk preferring individuals would take the second game, or the cause-based tort system. Only risk neutral individuals would see no difference between the two games.¹²⁵

Evidence suggests that most individuals are risk averse in situations such as are typically posed by the tort system, namely situations in which there is a danger of substantial downside loss.¹²⁶ Perhaps the strongest evidence that individuals are risk averse is the widespread existence of third-party insurance.¹²⁷ Third-party insurance is nothing more than an effort by agents to convert tort from a roulette system like game two to one like game one.¹²⁸

125. See generally J. HENDERSON & R. QUANDT, MICRO-ECONOMIC THEORY 56-57 (1980) (defining risk aversion, risk preference, and risk neutrality in terms of attitudes toward lotteries and their expected values).

126. See Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 527 n.47 (1986).

127. *Id.*

128. Insurance only partially succeeds in doing this, however, due to the generally crude risk classifications insurers use in establishing coverage and rates. See generally G. CALABRESI, THE COSTS OF ACCIDENTS 247-49 (1970).

An interesting, but only tentative, case for a cause-based system has begun to emerge, once we consider administrative costs. The cause-based system, by generating fewer liability events, promises to be less costly to implement.¹²⁹ While considerations of risk preference tend to favor liability for risk, the existence of insurance may mitigate that consideration sufficiently to leave a cause-based system in the preferable position.

Of course, this is only a first approximation. For those with strong libertarian, antiredistributive predilections, the determination of cause may seem less vulnerable to error, manipulation, or subversion. Judges or juries may choose to ignore the proper boundaries of the law more in calculation of expected harm than in determining causation. Certainly the devotion of corrective justice advocates to the causation requirement has been partially motivated by a fear of the potential redistributive effects of the alternatives.¹³⁰

Another element of administrative costs to be weighed affects the reliability of the two systems in satisfying the compensation objectives of corrective justice. Judgment-proof, absent, and unknown defendants all elude the present system and diminish its compensation feature. An effectively implemented liability for risk system would extract many little payments from individuals rather than waiting for isolated large demands, so that it may prove more effective in providing compensation.

It will be impossible to appraise the comparative weight of these and other arguments in the abstract; one will need to consider specific subcategories within tort as presenting different opportunities for adopting a liability for risk system. Cases like *Toxic Dumper*, for example, seem ready for such an approach. Toxic harms typically have long latency periods, such as that between exposure to a carcinogen and contracting cancer. Under the present cause-based system, the planning horizon of the risk-taker and the maturation of the harm can be seriously mismatched.¹³¹ Company

129. See Coleman, *The Structure of Tort Law*, 97 YALE L. J. 1233, 1242-45 (1988) for an analysis of the efficiency-related arguments for the bipolar tort structure. See also Priest, *supra* note 14.

130. Historically, the major concern of libertarian individualism has been with redistribution at the hands of government. Cause-in-fact has long been held to be an objective phenomenon that could not be manipulated for ulterior purposes. See Horwitz, *The Doctrine of Objective Causation*, in *THE POLITICS OF LAW* 201 (D. Kairys ed. 1982); Zwi, "Cause in Fact" in *Tort Law—A Philosophical and Historical Examination*, 31 DE PAUL L. REV. 769, 784-93 (1982); cf. Epstein, *supra* note 28, at 198-99 (wondering where one stops in compelling "forced exchanges" if one moves away from his corrective justice, cause-based system).

131. E.g., Pierce, *supra* note 111, at 129-99; Robinson, *supra* note 5, at 782-83.

managers in particular may have long since departed their companies before the harms mature enough to support tort recovery.¹³² Hence, the tort system produces low incentive to engage in safe behavior. Worse still, the tortfeasor may be entirely unavailable to stand for judgment, whether because of natural business failure or strategic bankruptcy.¹³³ Evidentiary problems inherent in addressing long latency risks through the present system are also pervasive.¹³⁴ In short, a cause-based system will not be very reliable in these circumstances.

In contrast, liability for risk is a pay as you go system for risk-taking. Risks are treated as a resource that must be purchased before they can be used, thus eliminating the mismatch between the payment system and long latency harms.¹³⁵ In addition, administrative costs do not favor a cause-based system in toxics cases, because the detection of toxic discharges (risks) is not substantially more costly an undertaking than is detection of the source of toxics-

132. Robinson, *supra* note 5, at 782-83; Roe, *Bankruptcy and Mass Tort*, 84 COLUM. L. REV. 846 (1984).

133. See Sugarman, *supra* note 71, at 593 (noting number of tort defendants who are judgment-proof).

134. See sources cited *supra* note 10.

135. Rosenberg, *supra* note 9.

This picture is grossly oversimplified, even with respect to the toxic cases of long latency. Importantly, in these cases we often cannot tell who has been wrongly injured, rather than injured "merely" as a result of undifferentiated background exposure to risky agents not attributable to some risk taker. The *ex ante* approach does not address these situations of "indeterminate plaintiffs," but that does not make them counterexamples to the general superiority of the *ex ante* approach. To begin with, present doctrine is immobilized by these cases as well. A number of proposals have been made to try and cope with these cases, most by allowing proportional recoveries to all persons in the injured population, some by advocating recovery by the most likely victims. See, e.g., Farber, *supra* note 10, at 1243-51. All of them can be seen simply as pragmatic modifications of the *ex ante* paradigm, as easily and perhaps more easily than they can be seen as modifications of the existing paradigm. The point is that conflicting pragmatic considerations or other concerns that legal doctrine must reflect can certainly be accommodated within an *ex ante* worldview.

A similar line of reasoning would greet the many other practical difficulties that a realistic tort system must meet, many of which require compromises and adjustments to principle. A number of social objectives for our current tort system have been advanced, including deterrence, compensation, loss-spreading, and production of knowledge regarding risk. There is no good reason to believe that all of them could not be promoted by an appropriately structured alternative system. In fact, liability-in-proportion-to-risk proposals are generally supported by arguments that they fulfill the classic functions of tort law better than the existing system. See, e.g., Delgado, *supra* note 7; Robinson, *supra* note 5; see also King, *Causation, Violation, and Chance in Personal Injury Torts Involving Preexisting Conditions and Future Consequences*, 90 YALE L.J. 1353, 1376-81 (1981) (making same arguments for his similar proposal to compensate for loss of a chance).

related harm (causes). Furthermore, the number of liability events is actually fewer under a liability for risk system, where someone like Amalgamated is charged once for the entire risk created by its discharging, than under a cause-based system, where each discrete harm constitutes a discrete liability and litigable event.

On the other hand, until fancy technologies are available, cases like Speeding Motorist probably ought to continue to receive cause-based treatment. Administrative costs for a liability for risk system would be astronomical and ought to preclude its adoption on that ground alone. Besides, the widespread availability of liability insurance enables the cause-based system to approximate a liability for risk system.

In sum, administrative considerations will argue for causation in some circumstances and against it in others.

Turn now to the second assumption, and look briefly at the situation in which expected harm is not calculable in any satisfactory degree. This can result because we know distressingly little about the causal chains that can potentially ensue from a faulty action, and so can construct no satisfactory fault-tree. Such situations have been called cases of nonactuarial risks.¹³⁶

It may seem that the entire case for risk liability collapses in nonactuarial situations. For *ex ante* purposes, the core objection to a cause-based system is that our inability to see future causal chains produces a kind of blindness, making us vulnerable to contingency. Risk assessment techniques supplied us with enough vision to construct a liability system fairly free of contingency, while also satisfying internal financing and just compensation, but only in relatively predictable settings. With respect to nonactuarial risks, we are blind once again, and hence unable to design a liability system that eliminates contingency and vulnerability.

There is force to this argument. The risk liability theory of tort advanced here does largely collapse in the nonactuarial case. However, this fact alone does not support an argument for the essential connection between causation and corrective justice.¹³⁷ That connection still fails to meet the objections raised against it from the *ex ante* viewpoint, even though we now lack the rhetorical advantage of being able to advance a preferable system in its place. Any retention of causation, then, must still be on very shaky ground; it is a

136. For discussion of such risks, see Alexander, *supra* note 28, at 1-21.

137. *Cf. id.* (noting lack of appeal of causation in nonactuarial situations).

system recognized to fail in its corrective justice ambitions, waiting merely for a better alternative to appear.

Such an alternative will in time appear. Whether quantitative risk assessments are good enough to supply the basis for a liability for risk system will always be a question of judgment and degree, rather than truth or falsity. Although 1989 assessments are highly imperfect, we can place more confidence in such assessments in 1989 than we could in 1940. Risk assessments are penetrating increasingly into arenas in which government actions turn on them, including into the courts.¹³⁸ We should continue to perfect them, to improve them, and to adjust ones already made. It is doubtful they can be rejected as invalid across the board. As their availability expands, the region in which the argument made here becomes feasible also expands.

Finally, so long as the potential for applying risk assessments in the way suggested in this Article is granted, the main argument of the Article stands as a paradigmatic way to view corrective justice, one in which the essentialist link between corrective justice and causation is broken. While tort doctrine may well continue to include causation for years to come, anyone subscribing to the idea that the common law works itself pure over time can benefit from having a sharp picture of the ideal toward which it is moving. For a long time, corrective justice theory has asserted that causation is an essential part of any such picture. This Article has presented another picture without causation in it and argued that it is the truer image.

138. While the difficulties confronting risk analysis and the presentation of useful risk assessment information should not be discounted, one should also be aware of the terrific gains in risk assessment techniques and in the use of statistical and probabilistic information in judicial proceedings in the past decade. For a succinct summary of the difficulties, see, e.g., *THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURTS* 11-37 (S. Fienberg ed. 1989). For a summary of the increasing use of statistics in litigation, see Vidmar, *Assessing the Impact of Statistical Evidence, A Social Science Perspective*, in *THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS IN THE COURTS* 280 (1989). For critiques of their application in government regulation, see sources cited *supra* note 98.